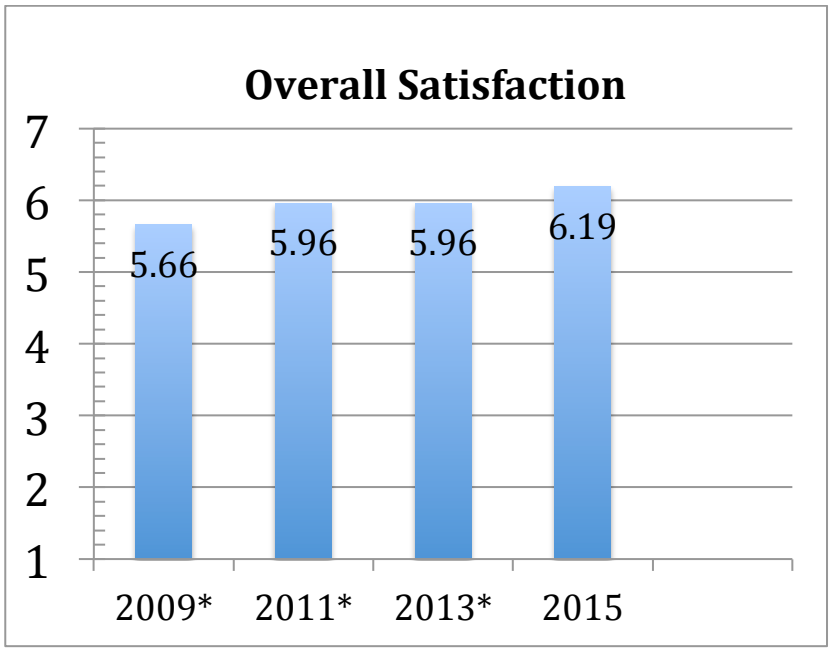
2015 NAS User Survey Results

For the 2015 NAS User Survey, 314 users from all NASA mission directorates (including supporting university and industry personnel) assessed 12 HECC service areas where the NAS User Services team provides support.

This report summarizes the survey results and describes activities taken to improve performance in four key areas: job turnaround time, /nobackup filesystems, data transfer, and training.

Comparison with Prior User Surveys



** Calibrated from 5 point scale*

The HECC survey measured user satisfaction in 12 HECC service areas. These quantitative results, as well as more detailed user feedback, help guide the HECC support team to focus on service quality improvements.

Lessons learned from past surveys led the team to further enhance the survey design, which helped us gain more insight into the nature of users' concerns. New features of the 2015 NAS User Survey included:

- Using a 7-point scale to capture more detail in response scores
- Adding "importance" question to cross reference with scores from service areas
- Adding logic questions to gain more detail from low scoring responses

Survey Highlights

After reviewing feedback from the User Survey we have completed our analysis of the results. Highlights include:

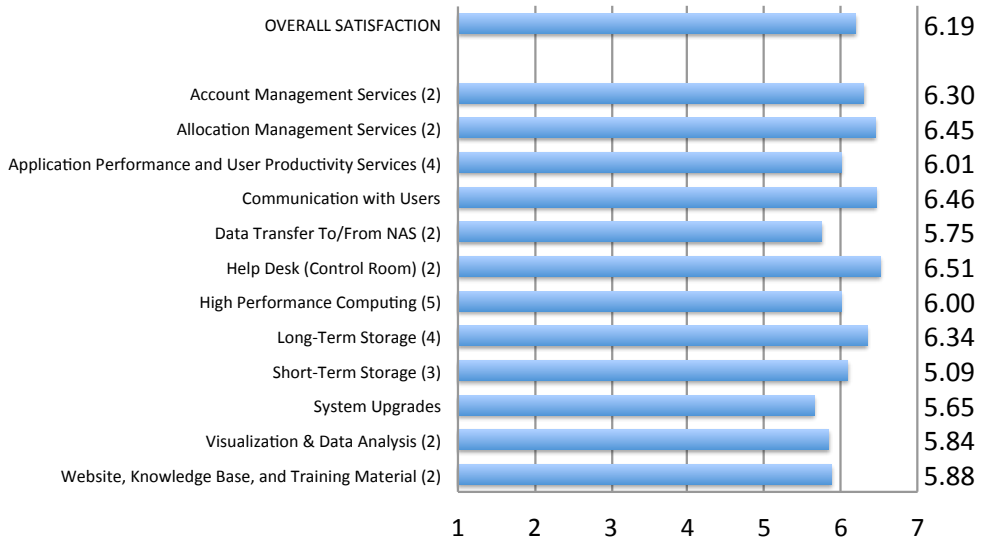
- Scores are very similar to past surveys, with Overall Satisfaction scoring 6.19 out of 7.0.
- The "Control Room" and "Communication with Users" areas received the highest scores
- "Allocation Management Services" showed the most improvement

The most requested future requirement continues to be increased compute power, as shown in this representative quote from one of our users:

"Really good service overall but system should be larger for faster turnaround."

The following table shows the Overall Quantitative Scores.

Overall Quantitative Scores



Actions

Based on your feedback and on data showing which aspects of NAS service need the most improvement, we have taken the following steps in each of the following categories:

Job Turnaround Time
Job turnaround time was the most common response to the question "What aspects of NAS service need the most improvement?" To address this issue, we made a number of changes, including:

- Increased Pleiades capability by over 35% by adding 28 Broadwell racks, including 10.5 purchased by ARMD
- Developed plans for a Modular Supercomputing Facility and began implementation—completion scheduled for first quarter of FY2017
- Decreased system failures
- Reminded users to use checkpoint capabilities
- Completed enhancements to the PBS scheduler to help ensure resources are more fairly available to the different mission directorates and to improve job wait times
- Adjusted priorities on various mission queues
- Completed and implemented a scheduler just for the devel queue
- Sent reminders on devel queue usage policies
- Began code improvement initiative

Short-Term Storage
To improve performance, uptime, and information on quota limits, we took the following actions:

- Acquired and deployed additional and larger /nobackup filesystems (e.g., the /nobackupp2 filesystem)
- Tested and deployed a parallel NFS system
- Developed plans to balance users across all filesystems; implementation is now in progress
- Conducted initial user education on how to properly stripe files
- Worked with vendors to improve filesystem performance and stability

Data Transfer (Wide-Area Network)
To improve data transfer mechanisms and increase user information about data transfer we completed these tasks:

- Updated the Shift tool to provide new features, as part of ongoing enhancements to the tool
- Repurposed hardware to create Shift-specific nodes to improve data transfer performance
- Presented a web-based user training session (webinar) on simplifying and optimizing data transfers

Training
To provide more training and detailed online resource documentation, we restarted the web-based user training (webinar) program, as follows:

- Conducted four webinars since April and posted the training materials online
- Scheduled one webinar per month through October
- Developed a long-term schedule for the webinar program

Thank you for your participation in the 2015 NAS User Survey. We are already in the planning stages for the 2016 survey!